



Glenn Research Center



Objectives

- ◆ **Analyze structure, stability and dynamics of low temperature reactions in static and flow reactors**
- ◆ **Use microgravity to minimize natural convection, eliminate thermal/concentration inhomogeneities**

Applications

- ◆ **Sparkless Ignition**
(Activated Radical Combustion, Radical Ignition)
- ◆ **Fire Safety: Explosion Limits**
(Fuel Cells, Catalytic Reactions, Space Vehicle Re-entry)
- ◆ **Application to Excitable Media**
(Biological implications: Cardiovascular pacemakers - sudden cardiac death; Neurological pulses; Rotors in the brain - epilepsy; Rotors in the retina - scintillating blind spots associated with migraine headaches)
- ◆ **Engine Knock**